



**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Akihiro SHIMADA

Appln. No.: 10/089,547

Group Art Unit: Not Yet Assigned

Confirmation No.: Not yet assigned

Examiner: Not Yet Assigned

Filed: April 01, 2002

For: AXIAL MAGNETIC BEARING APPARATUS

**PRELIMINARY AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

**RECEIVED**

JUL 02 2002

**GROUP 3600**

Sir:

Prior to examination, please amend the above-identified application as follows:

**IN THE SPECIFICATION:**

**Pages 9-10, delete paragraph 3 and replace with the following:**

In order to solve the above-mentioned problems, the present invention provides axial magnetic bearing apparatus in which a rotary disc made of a magnetic material is fixedly attached to a rotating shaft, while a pair of electromagnetic stators in each of which a ring-like electromagnetic coil for generating magnetomotive force is inserted into a coil slot are fixed to casings respectively so as to be located on opposite sides of the rotary disc with suitable very small distances, and on the basis of an output signal of a displacement sensor for measuring axial displacement of the rotating shaft, magnetic attraction force is made to act between the rotary disc and each of the electromagnetic stators so as to bear the rotating shaft in a target position distant from the electromagnetic stators and in non-contact therewith, wherein a deep groove for